

Work Order ID 82209

March-26-12 9:56:52 AM

82209

6:25/1:10

Page 1

Item ID: D3407-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Stem

Stop ***NS2***

Start Date: 26/03/2012 Start Qty: 30.00

Required Date: 09/04/2012 Req'd Qty: 30.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/03/26 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3407

Rev E

100

0.00

100

DOOSAN LATHE

29 12-4-3

53

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA596 Rev AA & Dwg D3407 Rev: E 2-Deburr

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

29 12-4-3

53

QC

Memo

0.00

Quality Control

120

QC8- Inspect parts - second check

0.00

120

BA 12/04/04

53

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 82209

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Page 2

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Item ID: D3407-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Stem

Stop ***NS2***

Start Date: 26/03/2012 Start Qty: 30.00

30

Cust Item ID:

Required Date: 09/04/2012 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Identify as per dwg & Stock Location WA

0.00

130

Packaging

Memo

0.00

Packaging

12/4/5 SP 530

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

12/4/5 SP

12-04-5

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

March-26-12 9:56:56 AM

Page 1

Work Order ID: 82209

82209

Parent Item: D3407-1

D3407-1

Parent Item Name: Stem

Start Date: 26/03/2012

Required Date: 09/04/2012

Start Qty: 30.00

Required Qty: 30.00

Comments:

IPP Rev:A05.10.18New issueKJ/EC

IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD

IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174R0.750		Purchased	No			100	f	5.8240	0.459	14.49474			

M174R0 750

17-4 round bar .750

**

28 12.4.4

Location

Loc Qty

Loc Code

MAT030

5.824

117683

0.465

118483

0.359

120196

5

121196

24.435

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	82209
Description: Tow Ring		Part Number:	D3407-1
Inspection Dwg: D3407 Rev: E		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	.063	/		12.02	
1/4-28 UNF	Max: 0.2668 Min: 0.2635	.264	/			
Major Ø	Max: 0.249 Min: 0.2425	.245	/			
Ø0.625	+/-0.010	.624	/			
Ø0.363	+/-0.010	.363	/			
Ø0.750	+/-0.010	.749	/			
R0.100	+/-0.010	R.100	/			
0.470	+/-0.010	.468	/			
0.500	+/-0.010	.497	/			
3.250	+/-0.010	3.250	/			
4.250	+0.000/-0.010	4.245	/			
5.270	+/-0.010	5.255	/			
0.150	+/-0.010	.150	/			
0.550	+/-0.010	.550	/			
0.625	+/-0.010	.627	/			
0.250	+0.010/-0.000	.259	/			

Measured by: 12.4	Audited by: b.m	Prototype Approval:	N/A
Date: 12.4.4	Date: 12/04/04	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.19	New Issue	KJ/JLM	
B	07.07.18	Tolerances for diameters updated per Machinists	KJ/JLM	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	DD

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

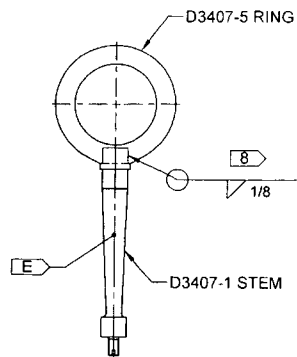
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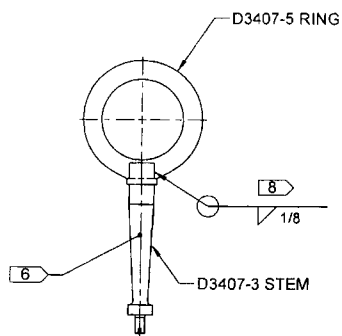
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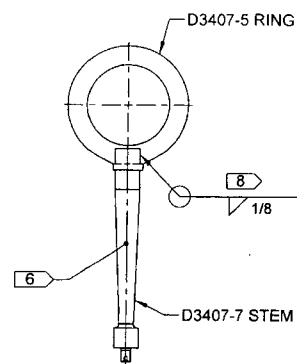
QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM



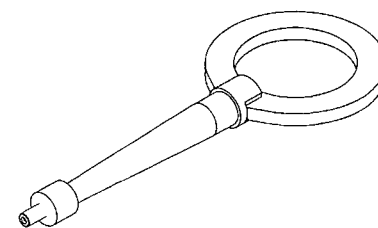
D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING



RELEASED

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 82209 MLJ
12/03/26

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
 - 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

REV.	DESCRIPTION	BY	DATE
E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/-3 LONGER FOR FIT WWASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.23		

DART AEROSPACE USA, INC.
PORT HADLOCK, WA

DRAWING NO. **D3407** REV. E
SHEET 1 OF 5
TITLE **TOW RING** SCALE NTS

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Dart Aerospace Ltd

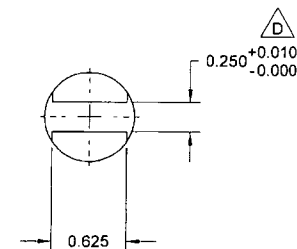
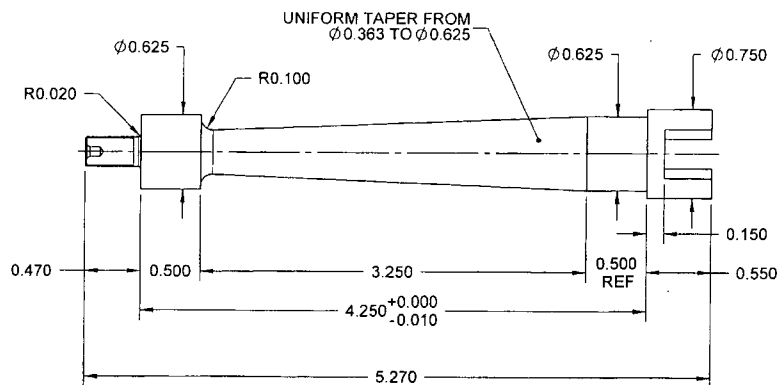
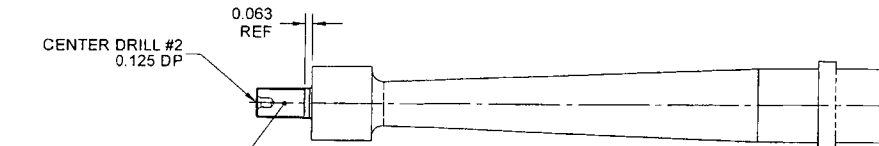
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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


NOTE: Date & initial all entries



D3407-1 STEM

NOTES:

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.33 lbs

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MFG. APPR.		D3407	SHEET 2 OF 5
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DE APPR.		TOW RING	NTS
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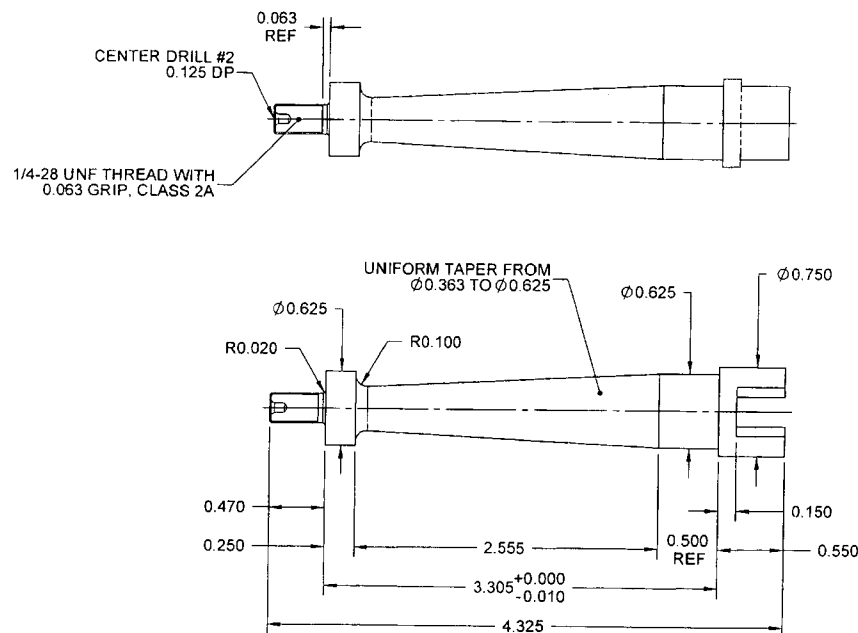
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

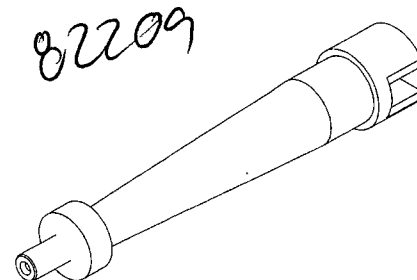
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3407-3 STEM



- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

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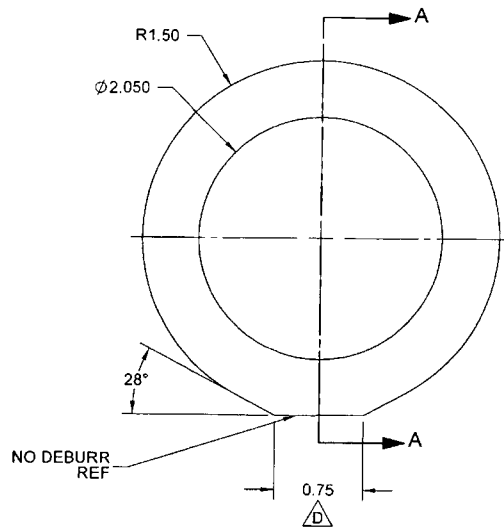
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

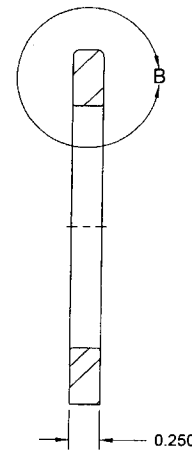
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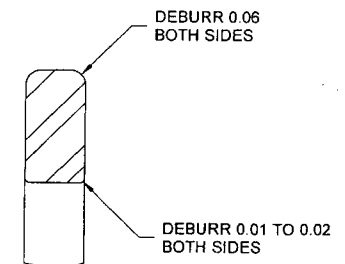
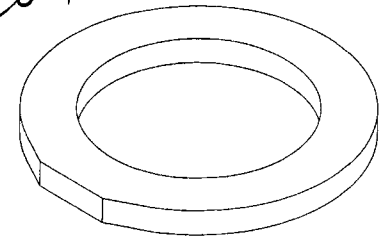
NOTE: Date & initial all entries



D3407-5 RING



SECTION A-A



**DETAIL B
SCALE 2X**

RELEASED
26-56-0111

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

DESIGN	92	DART AEROSPACE USA, INC.	
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MFG. APPR.	<i>[Signature]</i>	D3407	SHEET 4 OF 5
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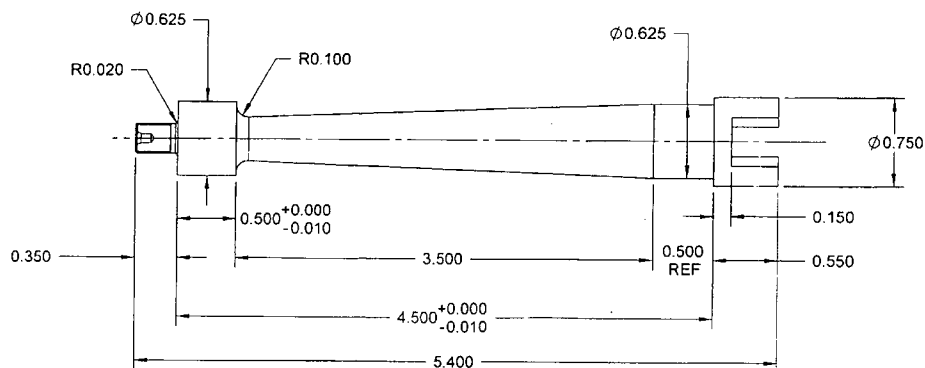
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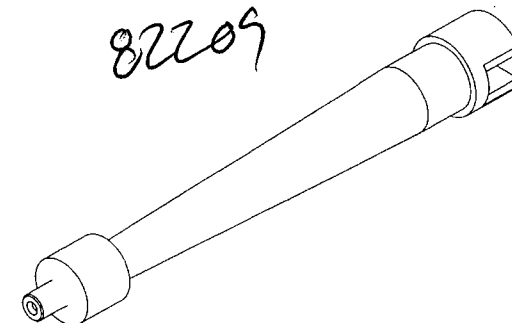
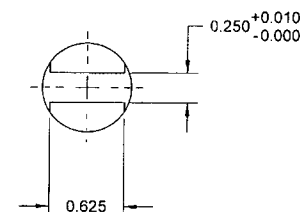
NOTE: Date & initial all entries

0.063
REF
CENTER DRILL #2
0.125 DP

1/4-28 UNF THREAD WITH
0.063 GRIP, CLASS 2A



D3407-7 STEM



RELEASED

NOTES:

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.34 lbs

DESIGN	AJS	DART AEROSPACE USA, INC.	
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